

# Homeland Infrastructure Foundation-Level Data (HIFLD) Subcommittee Update

*Provided by the  
HIFLD Executive Secretariat*

*17 March 2022*





# HIFLD Subcommittee Agenda



## Chair/Vice Chair Remarks:

What is happening?

Where are we going?

How can I partner?



## Data Access, Management, & Outreach:

Data Call (*Response Requested by April 8<sup>th</sup>*)

Outreach Update (*Informational*)

Data Usage Snapshot (*Informational*)

Inventory Update (*Informational*)

NGA Data Updates (*Informational*)



## HIFLD Community Platform:

DOT– National Transit Map (*Informational*)



## Open Discussion



# HIFLD Subcommittee Data Call



## HSIP Transition – Part of the (now signed) FY22 Budget

- DHS Data Procurement actions are in Market Research phase
- HIFLD Subcommittee Data Call **(Response Requested by April 8<sup>th</sup>)**
  1. Seeking input/ feedback on current Licensed Data holdings
  2. Gauging interest/ need for HIFLD High Side availability

**Request:** Please send Data Call Responses to [HIFLD@hq.dhs.gov](mailto:HIFLD@hq.dhs.gov) by **Friday, April 8<sup>th</sup>**



# HIFLD Subcommittee Data Call (1 of 4)



**Overall Guidance:** Please review each section and indicate feedback for individual layers or data categories as a whole. You may also attach additional notes or specific attributes needed for licensed datasets.

## Section 1: General Energy and Non-Energy Layers (Current)

Restriction	HIFLD Category	Layer Name
Secure	Energy	Biodiesel Plants
Secure	Energy	Distribution Control Facilities
Licensed	Public Health	Hospitals
Secure	LandScan	LandScan Guam (Day)
Secure	LandScan	LandScan Guam (Night)
Secure	LandScan	LandScan USA
Secure	Law Enforcement	Local Law Enforcement
Secure	Public Venues	Major Sports Venue Usage
Secure	Public Venues	Major Sports Venues
Secure	Public Venues	Mobile Home Parks
Secure	Public Health	Nursing Homes
Secure	Law Enforcement	Prison Boundaries
Secure	Transportation Ground	Rail Company
Secure	Transportation Ground	Railroad Yards
Secure	Transportation Ground	Routes and Stations
Secure	Chemical	Solid Waste Landfill Facilities
Secure	Transportation Ground	Stations and Transfers

**Request:** Please send Data Call Responses to [HIFLD@hq.dhs.gov](mailto:HIFLD@hq.dhs.gov) by **Friday, April 8<sup>th</sup>**



# HIFLD Subcommittee Data Call (2 of 4)



## Section 2: Business Points Feature Classes (Current)

<b>Agriculture</b>
<b>Mining and Quarrying</b>
<b>Manufacturing</b>
<b>Wholesale Trade</b>
<b>Retail Trade</b>
<b>Transportation</b>
<b>Warehousing and Storage</b>
<b>Postal and Delivery Services</b>
<b>Industrial Machinery Rental</b>
<b>Waste Management Services</b>
<b>Outpatient Care and Labs</b>
<b>Accommodations</b>
<b>Dining and Beverage</b>
<b>Centers of Worship</b>
<b>Burial Services</b>
<b>Courts of Law</b>
<b>Fire Protection</b>

**Request:** Please send Data Call Responses to [HIFLD@hq.dhs.gov](mailto:HIFLD@hq.dhs.gov) by **Friday, April 8<sup>th</sup>**



# HIFLD Subcommittee Data Call (3 of 4)



## Section 3: Parcel Data Format (Current)

<b>Delivered as one geodatabase per state or territory, one (feature) dataset per county, and four feature classes.</b>
<b>Contains feature classes designated by 'All-Residential' and 'All Non-Residential' county parcel data and information as polygons</b>
<b>Contains Infrastructure information on parcel improvements to include year built, building materials, basement type, square footage, number of rooms and baths, utility information, etc.</b>
<b>Contains (FIPS) code identified by the National Institute of Standards and Technology (FIPS Pub 6-4, 1990); and populated attribute fields for county name and state name</b>
<b>Contains date the data was last updated (not downloaded)</b>
<b>Contains census tract, block, range, township, lot number, Subdivision name and related information</b>
<b>Contains property area information</b>
<b>Applies the designated Coordinate System and Geo-positional Accuracy:</b> a) Geographic: Decimal degrees (minimum of 5 decimal places) b) Horizontal datum: WGS84 c) Projection: Un-projected d) Horizontal accuracy: <= 40 feet CE90 (Circular error 90% accuracy)
<b>PII limitations or requirements</b>

**Request:** Please send Data Call Responses to [HIFLD@hq.dhs.gov](mailto:HIFLD@hq.dhs.gov) by **Friday, April 8<sup>th</sup>**





# HIFLD Subcommittee Data Call (4 of 4)



## Section 4: Gauging Interest/ Need for HIFLD High Side Availability

1. Do you have sensitive (i.e., LES, CUI, or higher) mission requirements that could benefit from the HIFLD inventory?
2. Which aspects of the HIFLD inventory would best support sensitive mission requirements? For example, parcel data, business points data, etc.
3. Which GIS systems are more used/ preferred? i.e., commercial, open, or custom
  - A. Major challenges/ concerns with Esri?
  - B. What viewable file formats are needed to meet your platform?
  - C. How do you search and discover for data? How is metadata viewed?
4. If grouped systems are compartmentalized, what is common practice for data ingest?
  - A. Is it common to re-host third-party data, i.e., HIFLD?
  - B. If able to ingest data services, any major security/ network port challenges?

**Request:** Please send Data Call Responses to [HIFLD@hq.dhs.gov](mailto:HIFLD@hq.dhs.gov) by **Friday, April 8<sup>th</sup>**



# HIFLD Outreach Update



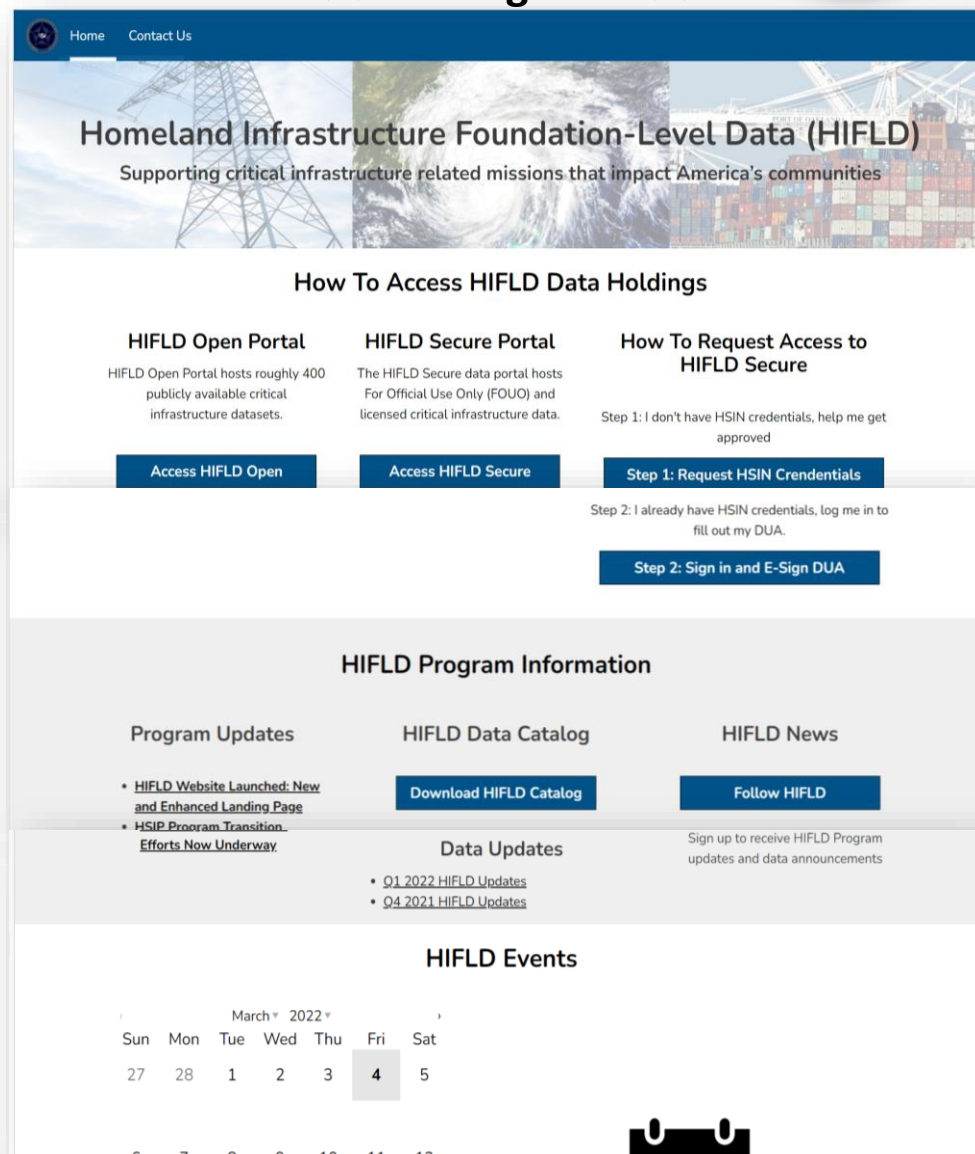
★ Coming Soon ★

## Recent Engagements include:

- HIFLD Open monthly trainings for CISA Infrastructure Security Division
- Mapping/ Data support planning for Louisiana and Arizona Fusion Centers
- Data updates for WA and TX S&L entities
- Open Data exchange with Walmart Emergency Management team
- 50+ user inquiries per week

## Planned Activities include:

- New Look/ Feel for HIFLD Website using ArcGIS Hub
- HIFLD Retrospective Effort: Request interviewees from the HIFLD SC
- Tentative HIFLD Presence at Esri S3 and UC, URISA PRO, NSGIC Annual Meeting, and NAPSG INSPIRE



Home Contact Us

## Homeland Infrastructure Foundation-Level Data (HIFLD)

Supporting critical infrastructure related missions that impact America's communities

### How To Access HIFLD Data Holdings

#### HIFLD Open Portal

HIFLD Open Portal hosts roughly 400 publicly available critical infrastructure datasets.

[Access HIFLD Open](#)

#### HIFLD Secure Portal

The HIFLD Secure data portal hosts For Official Use Only (FOUO) and licensed critical infrastructure data.

[Access HIFLD Secure](#)

#### How To Request Access to HIFLD Secure

Step 1: I don't have HSIN credentials, help me get approved

[Step 1: Request HSIN Credentials](#)

Step 2: I already have HSIN credentials, log me in to fill out my DUA.

[Step 2: Sign in and E-Sign DUA](#)

### HIFLD Program Information

#### Program Updates

- [HIFLD Website Launched: New and Enhanced Landing Page](#)
- [HSIP Program Transition Efforts Now Underway](#)

#### HIFLD Data Catalog

[Download HIFLD Catalog](#)

#### HIFLD News

[Follow HIFLD](#)

Sign up to receive HIFLD Program updates and data announcements

### Data Updates

- [Q1 2022 HIFLD Updates](#)
- [Q4 2021 HIFLD Updates](#)

### HIFLD Events

March 2022						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	1	2	3	4	5
6	7	8	9	10	11	12





# HIFLD Data Usage (October '21 to February '22)



Total Downloads



42,236 Layers

Users



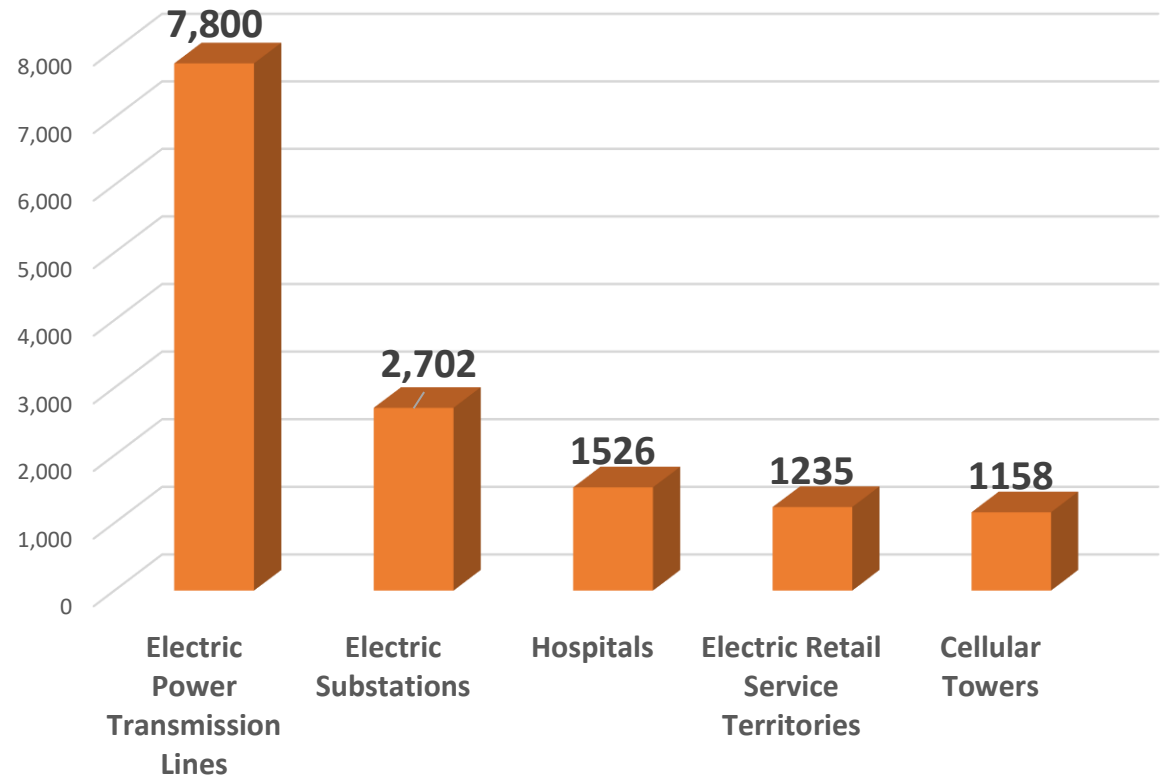
Oct 2021 – Feb 2022	40,508	6.81% Increase
May 2021 – Sept 2021	37,926	

Sessions



Oct 2021 – Feb 2022	66,768	6.69% Increase
May 2021 – Sept 2021	62,581	

## Top 5 Layers Downloaded From Oct 2021 to Feb 2022





# HIFLD Inventory Updates



## HIFLD Q2 Data Holdings Summary:

HIFLD's Q2 current data holdings consists of ~492 Open, Secure, and Licensed datasets available to the user community

## Key Accomplishments & Milestones:

- HIFLD Q2 Catalog updates successfully published
  - Q3 updates planned for April 1<sup>st</sup>
- Proactive Imagery resource acquisition
- LandScan USA data now available in the Open Portal
- Increased useability & searchability for user access – Keywords & improved descriptions
- Ongoing cross-agency data validation dialog and exchanges.



# HIFLD Inventory – FY21 Data Updates

## ❖ ORNL Maintained: Landscan USA & General Layers

- Delivery by end of PoP; early July 2022

*Status: **In Work/ ORNL**; In Review/ NGA; or, **Sent to DHS for publishing***

### I. Land Scan USA: *In Work (ORNL)*

### II. General/ non-Energy Layers: *All 'remaining' layers In work/ ORNL*

1. Hospitals: status:
2. Nursing Homes:
3. All Schools: K-12, (Public/ Private); Colleges/ Universities, points/ polygons; and Supplemental Colleges:
4. Child Care:
5. Major Sports Venues:
6. Solid Waste Landfills & Facilities:
7. Mobile Home & Recreational Vehicle (RV) Parks: *Sent to DHS for publishing*



# HIFLD Inventory – FY21 Data Updates



## ❖ **ORNL Maintained: Energy Layers; Electric System and Petroleum, Oil, Lubricants & Natural Gas (POL&NG):**

- Delivery by end of PoP; early July 2022

*Status: **In Work/ ORNL**; In Review/ NGA; or, Sent to DHS for publishing*

### **III. Electric System Layers:** *All layers, In work/ ORNL*

1. Control Areas:
2. Electric Holding Areas:
3. Electric Planning Areas:
4. Electric Power Transmission Lines:
5. Electric Retail Service Territories:
6. Electric Substations:
7. Federal Energy Regulatory Commission, (FERC) Regions:
8. Independent System Operators:
9. NERC Regions:
10. NERC Reliability Coordinators:
11. Power Plants:
12. Generating Units (Related Table):



# HIFLD Inventory – FY21 Data Updates



## ❖ ORNL Maintained: Energy Layers; Electric System and Petroleum, Oil, Lubricants & Natural Gas (POL&NG):

- Delivery by end of PoP; early July 2022,

*Status: In Work/ ORNL; In Review/ NGA; or, Sent to DHS for publishing*

### IV. POL & NG Layers: *All 'remaining,' layers In work/ ORNL*

1. Natural Gas Compressor Stations:
2. Natural Gas Storage Facilities:
3. Natural Gas Local Distribution Service Territories:
4. Natural Gas Import/ Export; (land-based & cross border points):
5. Natural Gas Import/ Export Terminals; (Liquefied Natural Gas )LNG)): *Sent to DHS for publishing*
6. Liquefied Natural Gas (LNG) Above Ground Storage layers:
7. Liquefied Natural Gas (LNG) Peak Shaving Plants:
8. Petroleum Pumping Stations:
9. Oil and Natural Gas Fields:
10. BioDiesel Plants: *Sent to DHS for publishing*





# HIFLD Inventory – FY21 Data Updates



## ❖ Commercial Acquisitions

### I. LightBox; Parcel Data: Last/ Final Option Year

- 2<sup>nd</sup> delivery received on Mar 1, 2022; *In Review/ NGA*
- 3<sup>rd</sup> / Final delivery: expected mid June (*est. publish period, Sep 2022*)

### II. CACI/ TransUnion Business Points; Base Year contract only; No Option Year (because of HSIP/ HIFLD Program Transition to DHS/GMO in FY22)

- 1<sup>st</sup> delivery made on Sep 3; data reviewed and accepted Dec. 2021  
*Due to data quality challenges, this data was not published.*
- 2<sup>nd</sup>/ Final delivery due April 25, 2022; (PoP End date is June 13, 2022)
- Note on license information/ guidance being finalized.

### III. HERE Technologies; Transportation/ Roads & Routing:

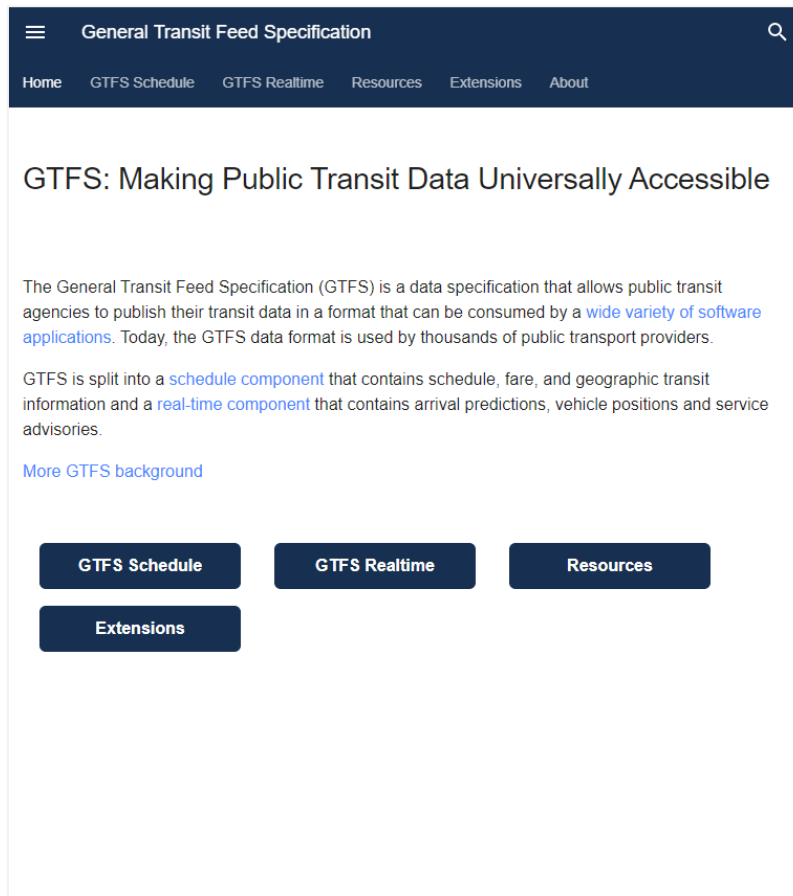
- *No FY21 requirement.*



## **Jordan Riddle, USDOT General Transit Feed Specification & National Transit Map**

# Overview

- **GTFS:** Background & Use Case
- **National Transit Map (NTM):** Coordination, Initiation, Access, & Future



General Transit Feed Specification

Home GTFS Schedule GTFS Realtime Resources Extensions About

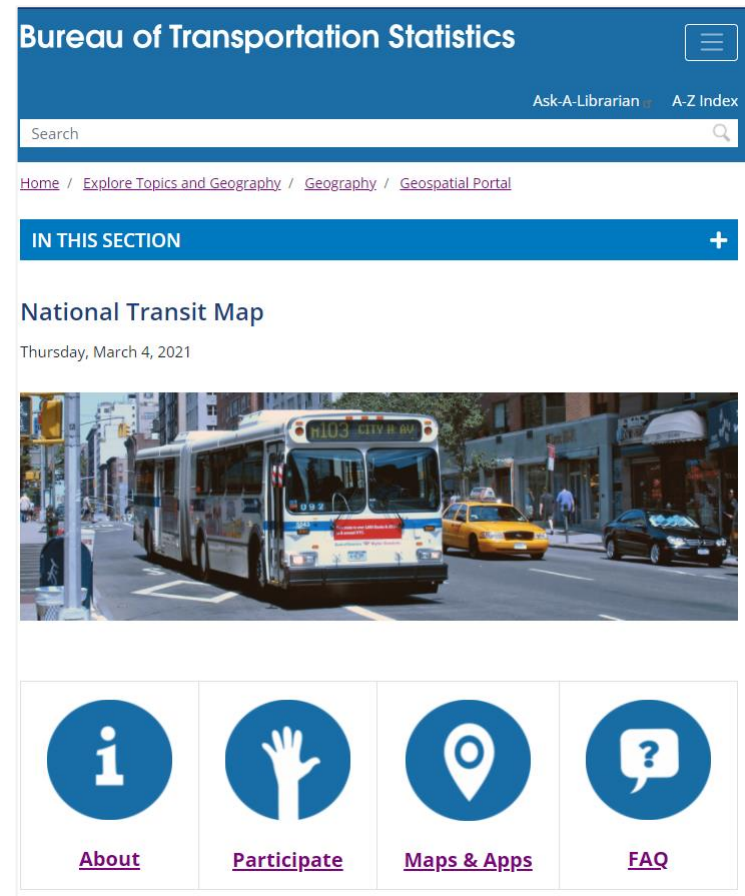
## GTFS: Making Public Transit Data Universally Accessible

The General Transit Feed Specification (GTFS) is a data specification that allows public transit agencies to publish their transit data in a format that can be consumed by a [wide variety of software applications](#). Today, the GTFS data format is used by thousands of public transport providers.

GTFS is split into a [schedule component](#) that contains schedule, fare, and geographic transit information and a [real-time component](#) that contains arrival predictions, vehicle positions and service advisories.

[More GTFS background](#)

GTFS Schedule GTFS Realtime Resources Extensions



Bureau of Transportation Statistics

Ask-A-Librarian A-Z Index


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## IN THIS SECTION

### National Transit Map

Thursday, March 4, 2021



About Participate Maps & Apps FAQ



# General Transit Feed Specification (GTFS)

## Background

- In 2005, TriMet and Google worked together to devise a way to structure transit schedule data into a format that could be read by Google Maps — the **Google Transit Feed Specification**
- Name changed to the **General Transit Feed Specification** to reflect its open-source nature and use in a variety of applications

CORE FILE	CONTENTS
Agency.txt	Name, website, other agency data
Stops.txt	Stop IDs, names, coordinates
Routes.txt	Route IDs, short + long names, colors
Trips.txt	Trips, headsigns
Stop_times.txt	Arrival/departure times, pickup types
Calendar.txt	Service days, start and end dates for service intervals





# GTFS Use Case: BTS Geospatial Workbench

A tool to analyze transit service and connectivity, incorporating dynamic, customizable elements for a variety of transit network characteristics in order to understand how different assumptions may impact the accessibility and frequency the transit network provides.

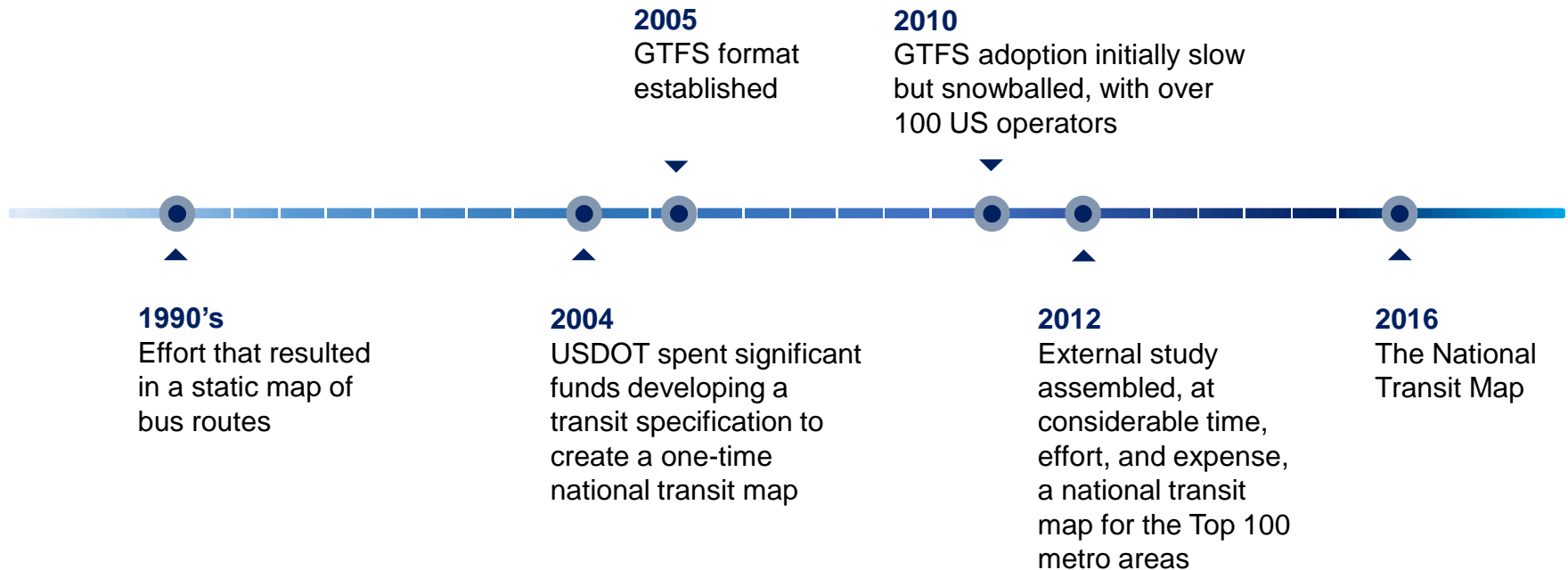






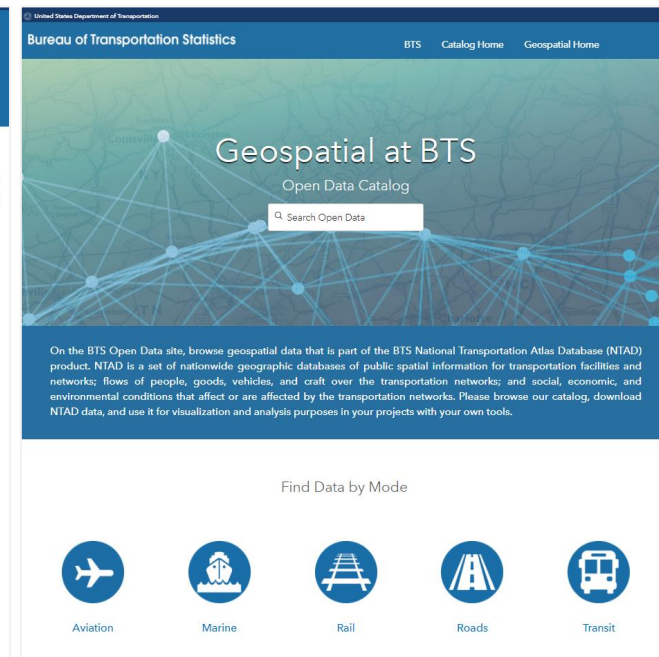
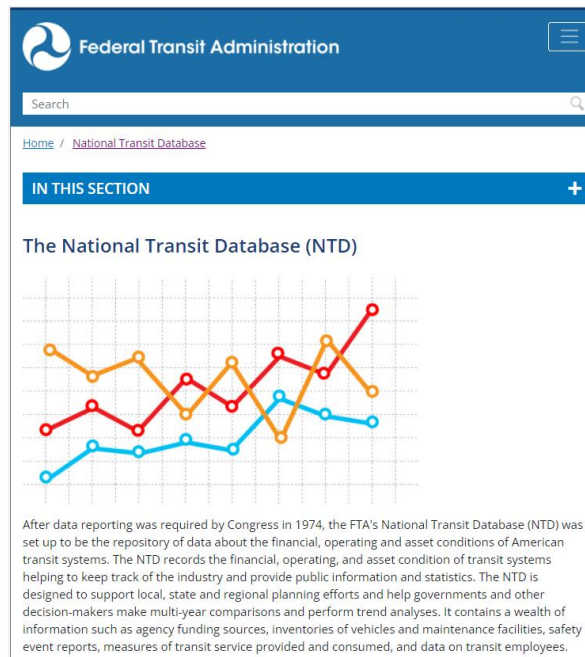
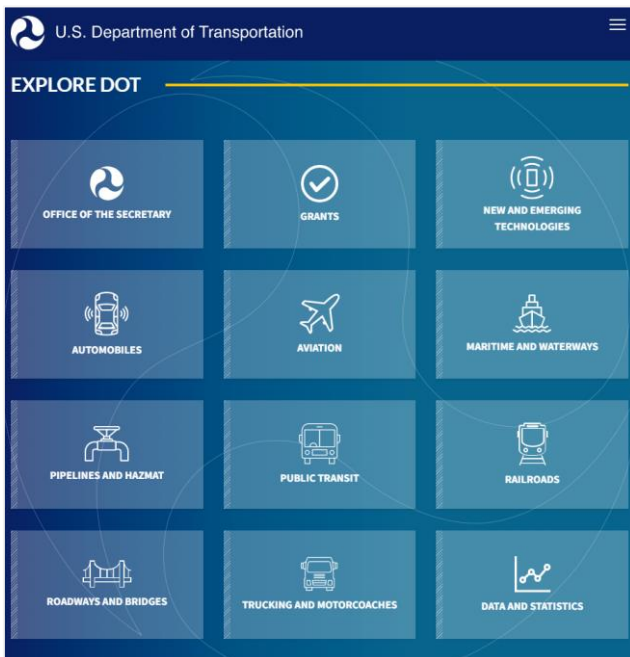
# National Transit Map (NTM)

## Initiating the Effort



# NTM: USDOT Partnerships


**Coordinated effort within USDOT:** Bureau of Transportation Statistics (BTS), Office of the Chief Information Officer (OCIO), Assistant Secretary for Transportation Policy (OST-P), and Federal Transit Administration (FTA)






# NTM: Agency Participation

[News](#) [Tasks \(2\)](#) [Records](#) [Reports](#) [Actions](#)

 **Matthew Daniel** ▾ [Appian](#)

 U.S. Department of Transportation  
Federal Transit Administration

[Save Changes](#)


## National Transportation Atlas Database > National Transit Map

Welcome to the National Transit Map participation portal! The National Transit Map will be a part of the larger National Transportation Atlas Database (NTAD), a set of nationwide geographic databases of transportation facilities, transportation networks, and associated infrastructure.

is to support research, analysis, and decision-making. The National Transit Map is a core service available through transit agency Web sites and commercial trip planning products in the National Transportation Atlas Database, the National Transit Map for navigation or up-to-date trip planning purposes. The National Transit Map will display static transit data for all participating transit agencies.

Department intends to leverage data that transit agencies already make available to the public data on stops, routes and schedules, please select Continue.

[Continue](#)

 U.S. Department of Transportation  
Federal Transit Administration

[Forgot your password?](#)

[If you are a FTA Employee, Click This Link to Login](#)

[SIGN IN](#)

# National Transportation Atlas Database

## NTM Data Downloads & Map Services



United States Department of Transportation  
Bureau of Transportation Statistics

BTS Catalog Home Geospatial

### Geospatial at BTS

Open Data Catalog

Search Open Data

Search

All Data Documents

Filters Reset 1 - 4 of 4 results

Content Type

- ☐ Feature Layer
- ☐ Table
- ☐ Document Link
- ☐ Map Service

Tags

- ☒ Transit
- ☐ NTAD
- ☐ Atlas
- ☐ Database
- ☐ Transportation
- ☐ National

More

Last Updated

1 - 4 of 4 results

**National Transit Map Agencies**  
U.S. Department of Transportation ArcGIS Online | USDOT\_BTS

The National Transit Map Agencies dataset was collected on January 16, 2022 and is from the Bureau of Transportation Statistics (BTS), and part of the U.S. Department of Transportation ArcGIS Online | USDOT\_BTS.

Type: Feature Layer  
Last Updated: February 16, 2022  
Rows: 2,411  
Tags: USA, National, United States, United States of America

**National Transit Map Routes**  
U.S. Department of Transportation ArcGIS Online | USDOT\_BTS

The National Transit Map Routes dataset was collected on January 27, 2022 and is from the Bureau of Transportation Statistics (BTS), and part of the U.S. Department of Transportation ArcGIS Online | USDOT\_BTS.

Type: Feature Layer  
Last Updated: January 27, 2022  
Rows: 32,244  
Tags: USA, National, United States, United States of America

**National Transit Map Stops**  
U.S. Department of Transportation ArcGIS Online | USDOT\_BTS

The National Transit Map Stops dataset was collected on January 27, 2022 and is from the Bureau of Transportation Statistics (BTS), and part of the U.S. Department of Transportation ArcGIS Online | USDOT\_BTS.

Type: Feature Layer  
Last Updated: January 27, 2022  
Rows: 32,244  
Tags: USA, National, United States, United States of America

ArcGIS My Map

Details Basemap

Print Measure Find address or place

About Content Legend

Contents

- ☒ GTFS NTM routes DS - National Transit Map Routes
- ☐ Topographic

routes.txt

```
route_id,route_short_name,route_long_name,route_desc,route_type
A,17,Mission,"The "A" route travels from Lower Mission to Downtown.",3
```

trips.txt

```
route_id,service_id,trip_id,trip_headsign,block_id
A,WE,ARE1,Downtown,1
A,WE,ARE2,Downtown,2
```

stop\_times.txt

```
trip_id,arrival_time,departure_time,stop_id,stop_sequence,pickup_type,drop_off_type
ARE1,0:06:10,0:06:10,51,1,0,0
ARE1,,S2,2,1,0
ARE1,0:06:20,0:06:30,53,3,0,0
ARE1,,S5,4,0,0
ARE1,0:06:45,0:06:45,56,5,0,0
ARE1,0:06:10,0:06:10,51,1,0,0
ARE1,,S2,2,0,0
ARE1,0:06:20,0:06:20,53,3,0,0
ARE1,,S4,4,0,0
ARE1,,S5,5,0,0
ARE1,0:06:45,0:06:45,56,6,0,0
```

calendar.txt

```
service_id,monday,tuesday,wednesday,thursday,friday,saturday,sunday,start_date,end_date
RE,0,0,0,0,0,1,20060701,20060731
WD,1,1,1,1,1,0,0,20060701,20060731
```

https://geodata.bts.gov/search?q=NTM





# NTM: Forthcoming Resources

data.bts.gov Data Catalog Create ▾

**BTS Data Inventory**

Explore open data from the Bureau of Transportation Statistics

Search for Data



## National Census of Ferry Operators

NCFO includes information on ferry vessels, terminals, routes, ridership, funding, and more for all ferry operators within the U.S. and its territories.

Learn more about American ferry service >



## Average Domestic Airline Fares

BTS presents average air fares, computed using data from our Passenger Origin and Destination (O&D) Survey, a 10% sample of all airline tickets for U.S. carriers, excluding charter air travel.

Considering travel? Take a look at the airfares you can expect >



GTFS Front Door Home Get Started ▾ Best Practices ▾ Resource Library ▾

What is GTFS  
Who Uses GTFS  
GTFS 101

**GTFS Transit Agencies**

**DRAFT WIREFRAME FOR DEMO PURPOSES**

The GTFS Front Door

GTFS - General Transit Feed Specification - is a way of organizing transit data into a shareable format. Because it is a technical specification, it can be challenging to get a foothold.

That's where this resource comes in. The Front Door is meant to help transit professionals - from bus operators to city planners to application developers - get oriented and familiar with the format, its uses, and how to navigate the larger transit technology space with a GTFS.

This is not a how-to-build-GTFS guide, but will provide guidance and direction on where to get help with that. It will also connect the many disparate resources available which reference, use, or build on GTFS in one place.

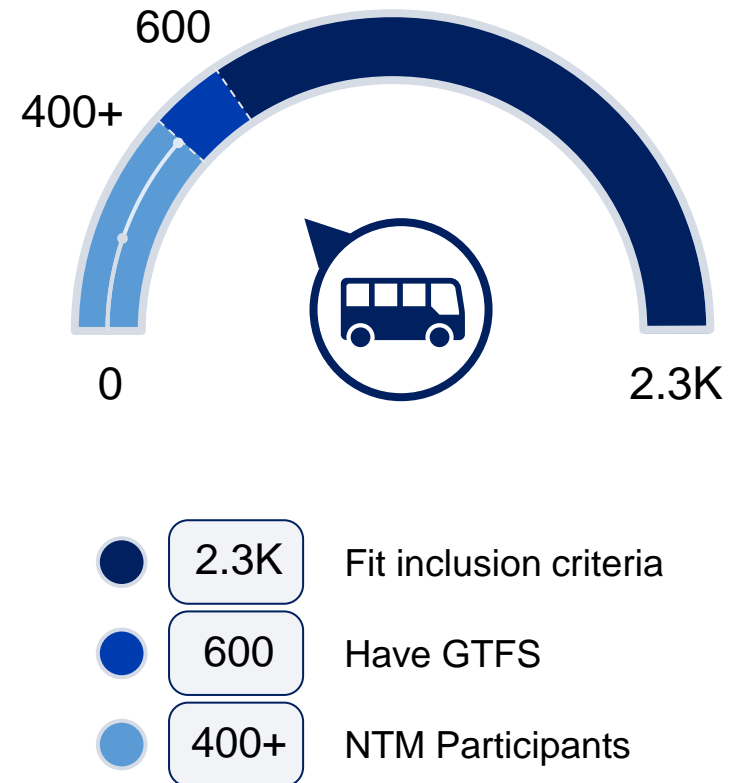
Get Started Open Data 101





## NTM: Ongoing Effort

- Quarterly updates
- Targeted outreach
- Feed creation
- Help identify gaps in access to public transportation and equity issues





# National Transit Map

[NationalTransitMap@dot.gov](mailto:NationalTransitMap@dot.gov)



**Jordan Riddle**

[jordan.riddle@dot.gov](mailto:jordan.riddle@dot.gov)

**U.S. Department of Transportation  
Bureau of Transportation Statistics**



# Open Discussion



Thank you for your participation!